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**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/010,490 01/21/98 HATA

K 177/527415

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QM32/0924

EXAMINER

SMITH, S

ART UNIT

PAPER NUMBER

3729

DATE MAILED:

09/24/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/010,490

Applicant(s)
Hata, Yoshida

Examiner
Sean Smith

Group Art Unit
3729



☒ Responsive to communication(s) filed on Jan 21, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 8-17 is/are pending in the application.

Of the above, claim(s) 16 and 17 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 8-15 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims 16 and 17 are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

- Art Unit: 3729

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dornes in view of JP403030499.

Regarding claim 8, Dornes et al. discloses a component mounting apparatus comprising; a pair component supply tables (42,44) on which components (56,56') are accommodated and which are arranged on opposite sides of a board mounting station where a board (8) is positioned; a first mounting head section (38) for successively picking up the components at one of the components supply tables (column 4 ln 6-12) and thereafter successively mounting the picked-up component onto the board (column 4 ln 14-18); a second insertion head (40) for successively picking up the components at the other supply table and thereafter successively mounting the picked-up component onto the board. Dornes fails to show the mounting head movable in a direction perpendicular to the direction of the other mounting head. JP 403030499 discloses moving in a first and second mounting heads in a direction which are perpendicular to

Art Unit: 3729

each other; wherein the first and second mounting head section are independently moveable between the component supply table and the board Fig 1

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Dornes and JP 403030499 to enable the mounting heads to be independently movable between separate workstation wherein the direction of the mounting heads are in opposite direction relative to one another.

Regarding claim 9, where Dornes is relied upon as above, JP 403030499 discloses the first, second, third and fourth direction of the mounting head are moveable in two directions perpendicular to each other Fig 1.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of JP 403030499 to enable the mounting heads to move in a direction equal or different from one another wherein the direction are movable in a X,Y axis.

Regarding claims 10 and 11, Dornes et al discloses controller (49) for mutually controlling the first and second mounting head section in accordance with the timing at which, when one of the first and second mounting head section carries out a component picking up operation for picking up the component from the component supply table, the other of the first and second mounting head operation for mounting the pickup component onto the board.

Art Unit: 3729

Claim Rejections - 35 USC § 103

3.. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dornes et al. in view of JP 403030499 and further in view of Oyama.

Regarding claim 12, Dornes discloses a mounting apparatus.. JP 403030499 discloses a component mounting apparatus having suction nozzles (17).Dornes and JP 403030499 fails to show the first and second mounting heads having a plurality of suction nozzles for sucking the components on at a time components at one time. Oyama discloses a plurality of nozzles mounted on a mounting head for picking up components on at a time. Fig 1

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the mounting apparatus of Dornes, JP 403030499 and Oyama to provide the first and second mounting head section with nozzles to pick up the component from the supply table and insert each component into the board in order to realize the benefits thereof, that each suction nozzles exhibit safety characteristic to not damage the component. The exact amount of suction in the nozzles is deemed to be a matter of design choice .

Response to Amendment

4. The rejection of claims 8-15 are not found persuasive the direction and movement of the mounted heads are a matter of design choice. The range of the mounting heads moving in a parallel or perpendicular as taught by JP 403030499 would allow the mounting heads to move in

Art Unit: 3729

a direction opposite from that of the other and in a range that would move the head in a horizontal or vertical axis relative to the placement of the component.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication should be directed to Sean Smith at telephone number (703) 305-0831.


4/2/99

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